

WHAT IS CLAIMED IS:

1. A refrigerant cycle apparatus comprising a compressor, a gas cooler, throttling means and an evaporator which are sequentially connected to each other
5 to form a refrigerant circuit, wherein:

the compressor is equipped with first and second compression elements in a sealed vessel, and refrigerant compressed in and discharged from the first compression element is taken in the second compression element to be
10 compressed therein and is discharged to the sealed vessel and subsequently to the gas cooler; and

the apparatus further comprises an intermediate cooling circuit which allows the refrigerant discharged from the first compression element to dissipate heat, and
15 the temperature and the pressure of the refrigerant are kept so that the refrigerant does not condense at the output of the intermediate cooling circuit.

2. The refrigerant cycle apparatus according to
20 claim 1, further comprising control means for controlling the number of revolutions of the compressor, wherein:

the control means controls the number of revolutions of the compressor so that the temperature and the pressure of the refrigerant are kept to prevent the
25 refrigerant from condensing at the output of the intermediate cooling circuit.

3. The refrigerant cycle apparatus according to claim 2, wherein,

the control means controls the number of revolutions of the compressor based on the temperature of the refrigerant to be suctioned into the second compression
5 element and/or the pressure of the refrigerant to be suctioned into the second compression element.